

# QuikSCAT Study #3

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## Summary

During the period NOV15 – DEC 15 2003 the third in a series of studies was conducted to quantify the impact of QuikSCAT wind data on the issuance of short-term marine wind warnings in the Ocean Prediction Center (OPC). The total number of warning labels issued by the OPC forecasters increased by five percent in the North Atlantic and by four percent in the North Pacific. While the impact appears to be much lower than in the past two studies (reasons yet to be determined) there are some consistencies within the analysis of the results. As in the previous two studies the increase in total number of warning labels issued was greater in the Atlantic than in the Pacific. The greatest impact was also again seen within the higher warning categories.

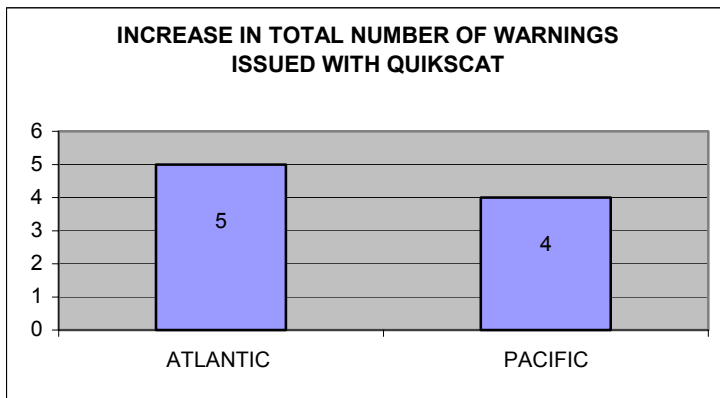


Figure 1 Percent Increase in Warnings Issued

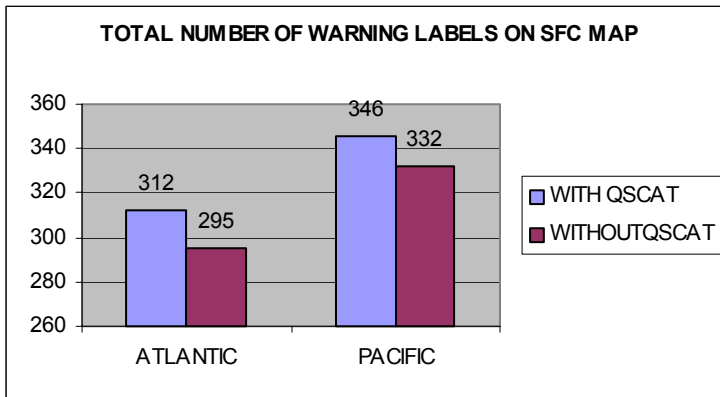
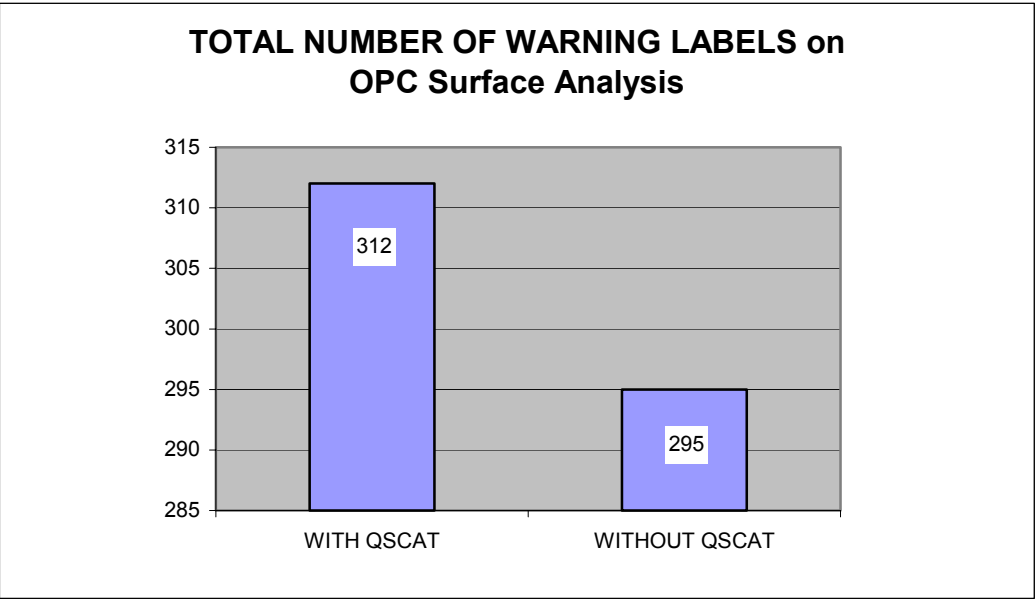
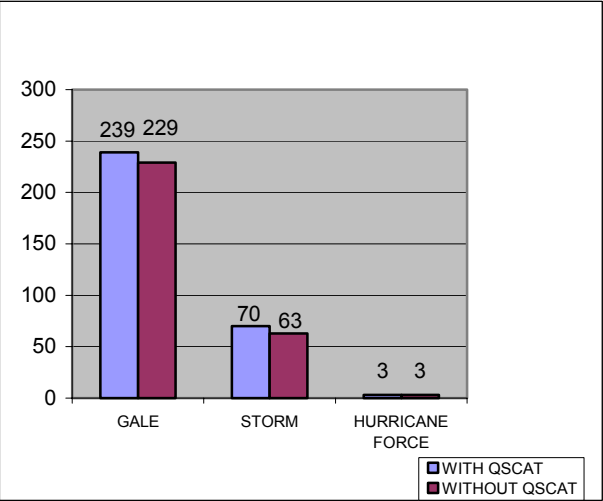


Figure 2 More warnings were issued when QuikSCAT was used.

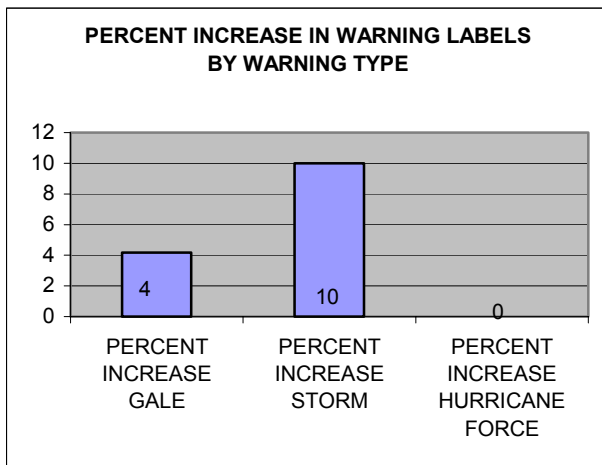
# North Atlantic



**Figure 3.** When QuikSCAT wind data was used in the warning process a total of 312 warning labels were placed on the North Atlantic surface analysis. If QuikSCAT were not available only 295 warning labels would have been issued.

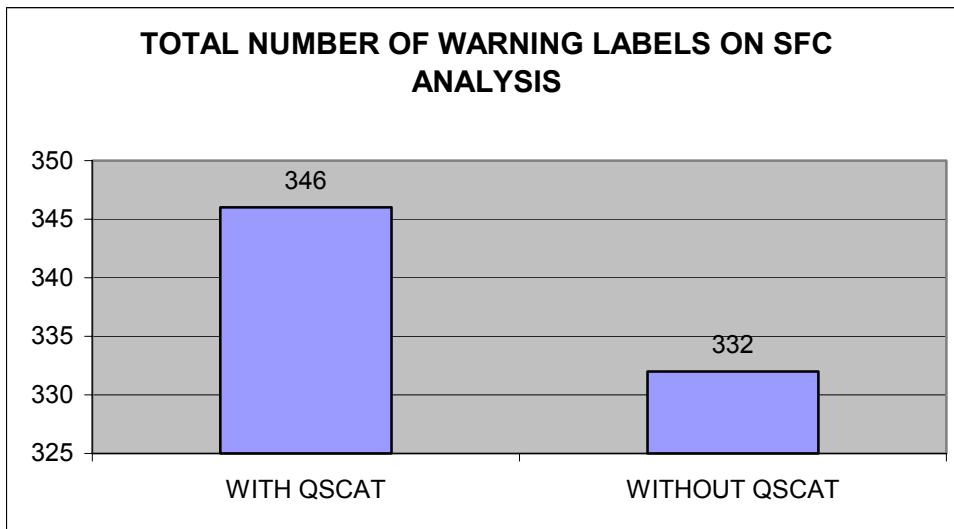


**Figure 4.** Number of warnings by category.

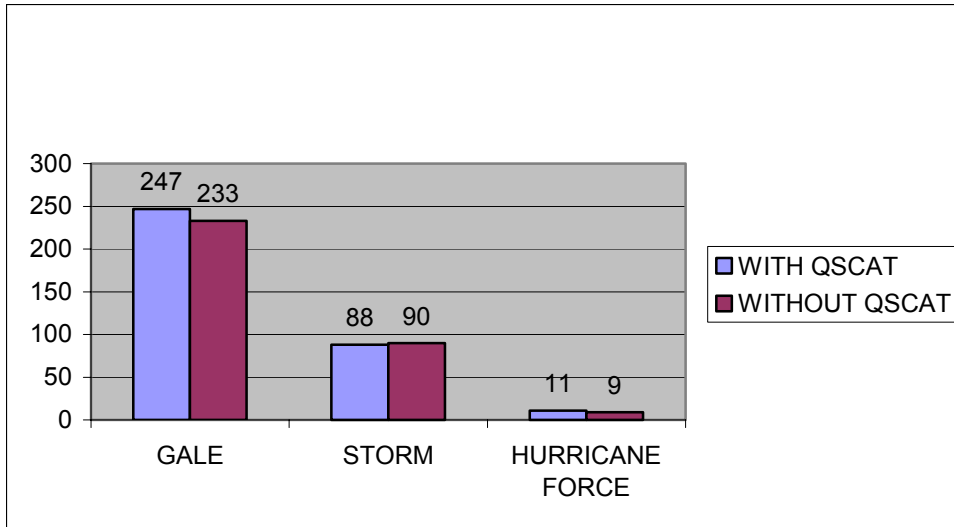


**Figure 5. Greatest impact was within the Storm Force Category**

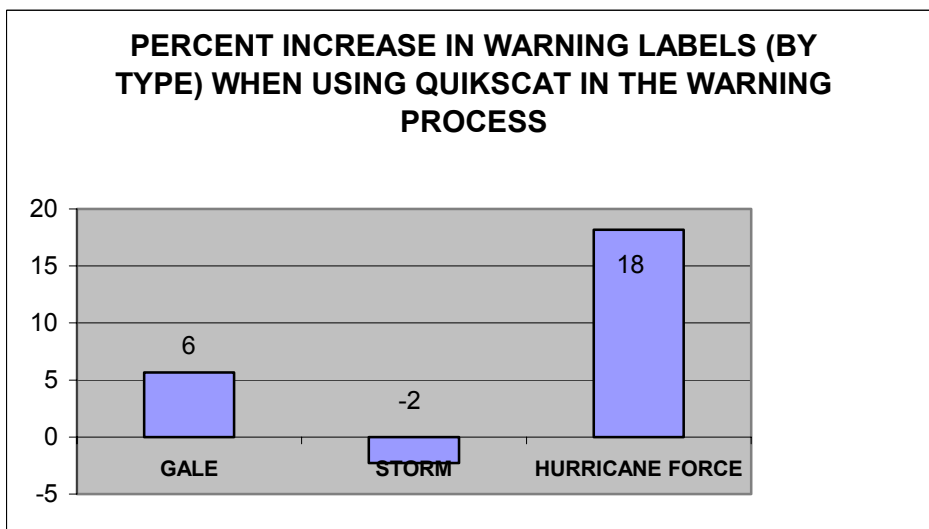
## North Pacific



**Figure 6. More wind warnings were issued with the use of QuikSCAT data.**



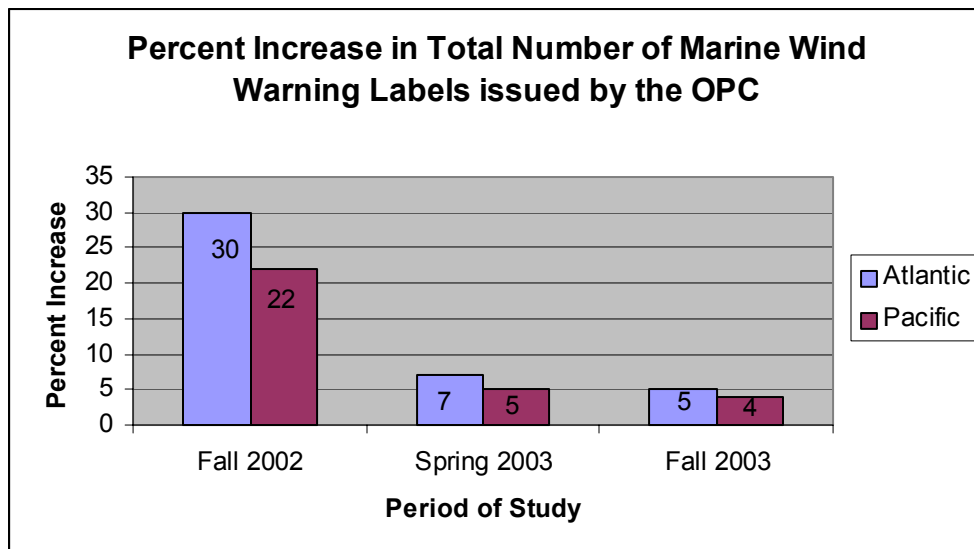
**Figure 6 Number of Warning Labels by category**



**Figure 7. Greatest impact was seen within the Hurricane Force category. QuikSCAT data enabled forecasters to identify more Hurricane Force cyclones. The number of Hurricane Force Warning labels increased, while the number of Storm Warning labels Decreased. Without QuikSCAT some of the some of the Hurricane Force Storms may have been under forecast.**

## Conclusion

Although QuikSCAT did make a positive impact on the number and type of warning labels issued on the OPC surface analysis charts, the impact was not as significant as in the previous studies.



**Figure 8**

We attributed the smaller impact in the spring of 2003 to the fact that the number and intensity of the storms were less than in the fall of 2002. The numbers for the fall of 2003 were both surprising and disappointing. Fall 2003 was no less active than Fall 2002, so we fully expected the results of this third study to be comparable with those of the first. We have concerns that the QuikSCAT data is not being utilized to its full potential. In order to continue to provide the OPC forecasters with the optimal tools available the use of QuikSCAT winds has to be justified. The main reason for conducting these studies is to show impact and thus provide the necessary justification to forge ahead with scatterometer technology. Due to the mixed results, it will be necessary to conduct one more study. In order to accurately assess the impact, this study will have to be more detailed and unfortunately more time consuming than the previous studies. However, we feel that this will be time well spent. There is a light at the end of the tunnel. This study will most likely be the last of this sort so hopefully we can all work together to make this the best.